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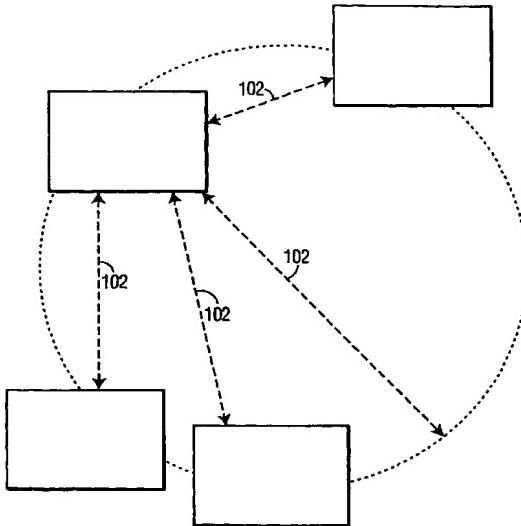
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(54) Title: MEASURING MEDIUM ACTIVITY PATTERNS IN WIRELESS NETWORKS AND DERIVING INFORMATION FROM THE ACTIVITY PATTERNS



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(57) Abstract: An apparatus and method is provided for measuring medium activity patterns in wireless networks and deriving information about the radio environment from the measured medium activity/patterns. This invention is three-fold. First, it defines what to measure, including medium idle/busy patterns based on power detection, medium idle/busy pattern based on preamble detection, and medium idle/busy pattern based on virtual sensing. Second, it provides a mechanism for communicating the measurement request and report, as illustration for the case of IEEE 802.11. And last, it defines the information that can be derived given these measurements as discovery of: non-802 devices, 802.11e systems, 802.11e contention-based medium access priorities, 802.11e controlled medium access usage, 802.11b/g existence, and hidden stations.

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*
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